

Triode Connection—Plates No.1A, 1B, and 2 connected to grid No.2

Plate Voltage	100	volts
Grid-No.1 Supply Voltage	0	volts
Grid-No.1 Resistor (Bypassed)	2.2	megohms
Transconductance	4500	μ mhos
Amplification Factor	45	
Plate Current	5.5	mA

Separate-plate operation; plates not under test grounded

	1A	1B	2	
Plate Voltage	100	100	100	volts
Grid-No.2 Voltage	100	100	100	volts
Grid-No.1 Supply Voltage	0	0	0	volts
Grid-No.1 Resistor (Bypassed)	2.2	2.2	2.2	megohms
Transconductance	2000	2000	1800	μ mhos
Plate Resistance (Approx.)	0.1	0.1	0.12	megohm
Plate Current	2.3	2.3	2.1	mA
Grid-No.2 Current	3.8	3.8	3.3	mA

Tetrode Unit as Frequency Divider and Complex-Wave Generator

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage (Each plate)	330	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	volts
Grid-No.2 Voltage	See curve page 300	
Grid-No.1 (Control-Grid) Voltage:		
Positive-bias value	0	volts
Negative-bias value	50	volts
Grid Dissipation (Each plate)	1	watt
Grid-No.2 Input:		
For grid-No.2 voltages up to 165 volts	0.65	watt
For grid-No.2 voltages between 165 and 330 volts	See curve page 300	

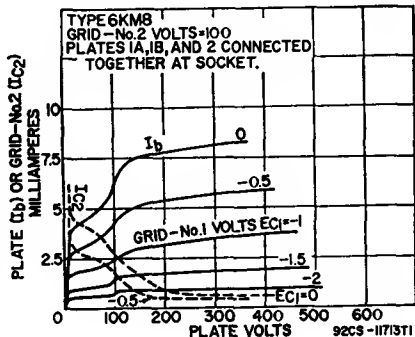
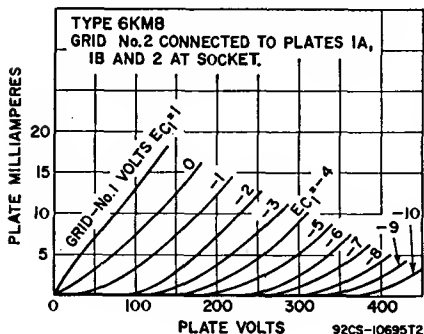
MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance, for grid-No.1-resistor-bias operation	2.2	megohms
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Diode Unit

MAXIMUM RATINGS (Design-Maximum Values)

Plate Current	1	mA
CHARACTERISTICS, Instantaneous Value		
Tube Voltage Drop for plate current of 2 mA	10	volts

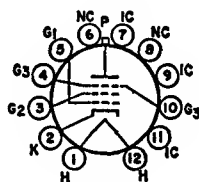


6KN6

42KN6

BEAM PENTODE

Duodecar type used as horizontal-deflection amplifier in color and black-and-white television receivers. Out-lines section, 39B; requires duodecar 12-contact socket. Type 42KN6 is identical with type 6KN6 except for heater ratings.



12GU

Heater Arrangement	6KN6 Parallel	42KN6 Series	
Heater Voltage	6.3	42	volts
Heater Current	3	0.45	ampere
Heater Warm-up Time	—	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts

Class A₁ Amplifier

CHARACTERISTICS	Triode* Connection	Pentode Connection	
Plate Voltage	130	5500	60 130 volts
Grid-No.2 (Screen-Grid) Voltage	130	125	125 130 volts
Grid-No.1 (Control-Grid) Voltage	—20	—	0 —20 volts
Plate Resistance	—	—	— 4000 ohms
Transconductance	—	—	— 16000 μ mhos
Plate Current	—	—	800 ^A 100 mA
Grid-No.2 Current	—	—	50 ^A 4 mA
Grid-No.1 Voltage (Approx.) for plate current of 1 mA	—	—	— —33 volts
Grid-No.1 Voltage (Approx.) for plate current of 75 μ A	—	100	— volts
Amplification Factor	4.5	—	—

^A This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

* Grid No.2 connected to plate.

Horizontal-Deflection Amplifier

For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Supply Voltage	770	volts
Peak Positive-Pulse Plate Voltage [#]	6500	volts
Peak Negative-Pulse Plate Voltage	1500	volts
Grid-No.2 Voltage	220	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Average Cathode Current	400	mA
Peak Cathode Current	1500	mA
Plate Dissipation*	30	watts
Grid-No.2 Input	5	watts
Bulb Temperature (At hottest point)	260	°C

MAXIMUM CIRCUIT VALUE

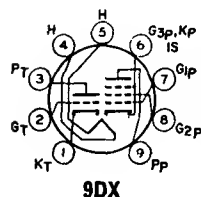
Grid-No.1-Circuit Resistance	1	megohm
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[#] Pulse duration must not exceed 15% of one horizontal scanning cycle (10 microseconds).

* A bias resistor or other means is required to protect the tube in absence of excitation.

Refer to chart at end of section.

6KN8/6RHH8



9DX

MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

6KR8
10KR8

Miniature type used in television receiver applications. The triode unit is used as a general-purpose amplifier; the pentode unit is used as a video amplifier. Outlines section, 6E; requires miniature 9-contact socket. Type 10KR8 is identical with type 6KR8 except for heater ratings.

Heater Voltage (ac/dc)	6KR8 6.3	10KR8 10.5	volts
Heater Current	0.75	0.45	ampere
Heater Warm-up Time (Average)	—	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts